

REMARKS/ARGUMENTS

Claims 1-22 remain in this application. Claim 1 has been amended to state that the device comprises a plurality of liquid reservoirs. Support for this amendment to claim 1 is found on page 19, lines 3-10 and original claim 15. Claims 21-22 have been added. Support for new claims 21-22 can be found throughout the specification (e.g., page 16, lines 16-28 and page 18, line 23 through page 19, line 2. Accordingly, no issues of new matter are believed to be raised by the above amendment to the claims.

Rejection Under 35 USC 103

Claims 1-20 were rejected under 35 USC 103(a) as being unpatentable over Zhang et al. (U.S. Patent No. 6,245,347) in view of Fujiwara (U.S. Patent No. 4,205,957). See Pages 2-5 of the Office Action. According to the Office Action, “Zhang et al. discloses an exothermic device for topically delivering an active agent comprising a liquid reservoir [However,] Zhang does not disclose that the liquid reservoir is a capsule comprising water and a salt, the inorganic powder is that of the instant claimed invention or that active agent is for the treatment of acne.” See Page 3 of the Office Action. The Office Action continues to state on page 4 that “Fujiwara discloses a heating element, a controlled heating device, comprising a liquid reservoir that is a capsule containing water and salt The advantage of the heating element taught by Fujiwara is that longer heating duration is obtained and longer storage. Therefore, it would have been obvious to one of ordinary skill in the art to use the teachings of Fujiwara in the invention of Zhang et al. to make the device of the instant claimed invention” As set forth in the Response filed on July 17, 2002, Applicants respectfully disagree.

However, in the interests of furthering this application to allowance, Applicants have amended claim 1 to recite that that the device comprises a plurality of liquid reservoirs. Applicants expressly reserve the right to file further continuation and/or divisional applications for subject matter claimed in the original claims.

Neither Zhang et al. nor Fujiwara discloses a device comprising a plurality of liquid reservoirs. As set forth on page 19 of the specification, one benefit of having a plurality of liquid reservoirs is that “[e]ach liquid reservoir may be individually ruptured at a predetermined time by the user as needed. An enhanced delivery of

active will follow each rupturing of the liquid reservoir for a certain period of time, thus, also resulting in a pulsatile delivery profile.” Such a controlled delivery device is not taught, nor suggested, by Zhang et al. nor Fujiwara.

In addition, new claims 21 and 22 recite a device exothermic device comprising a liquid reservoir which is a capsule comprising a sealed orifice that ruptures upon increased pressure. Upon the rupturing, water is released from the capsule through the ruptured orifice and contacts the heating element and the oxygen to create an exothermic reaction. Such a device is also not taught, nor suggested, by Zhang et al. nor Fujiwara.

Accordingly, Applicants respectfully request that the above rejection under 35 USC 103(a) be withdrawn, and Applicants respectfully requests that a timely Notice of Allowance be issued in this case.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page(s) is/are captioned “Version with markings to show changes made”.

Respectfully submitted,

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Dated: May 5, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please amend Claim 1 as follows:

1. (Twice Amended) An exothermic device for topically delivering an active agent, said device comprising:
- (a) a plurality of liquid reservoirs, wherein said reservoirs ~~is~~are capsules comprising water;
 - (b) a heating element, said heating element comprising an oxidizable material and where said heating element is in communication with said liquid reservoir;
 - (c) an oxygen-permeable outer-layer, wherein said oxygen-permeable layer is in communication with said heating element, permits oxygen from the environment to contact said heating element, and substantially inhibits the permeation of water from the heating element into the environment;
 - (d) an active agent; and
 - (e) a water-impermeable layer, wherein said water-impermeable layer separates said heating element and said active agent;
- wherein upon the rupturing of said liquid reservoir, said water contacts said heating element and said oxygen to create an exothermic reaction.

Please cancel claim 15, without prejudice.

Please add new claims 21 and 22.

21. (New) An exothermic device for topically delivering an active agent, said device comprising:
- (a) a liquid reservoir, wherein said reservoir is a capsule comprising water;
 - (b) a heating element, said heating element comprising an oxidizable material and where said heating element is in communication with said liquid reservoir;
 - (c) an oxygen-permeable outer-layer, wherein said oxygen-permeable layer is in communication with said heating element, permits oxygen from the environment to contact said heating element, and substantially inhibits the permeation of water from the heating element into the environment;
 - (d) an active agent; and
 - (e) a water-impermeable layer, wherein said water-impermeable layer separates said heating element and said active agent;

wherein said capsule comprises a sealed orifice that ruptures upon increased pressure, and wherein upon the rupturing of said orifice, said water is released from said capsule through said ruptured orifice and contacts said heating element and said oxygen to create an exothermic reaction.

22. (New) A device of claim 21, wherein said capsule comprises a plurality of orifices that rupture upon increased pressure.